Remarks/Arguments

Claims 1-36, 38 are pending in the application.

The Examiner has rejected claims 1-12, 14, 18-29, 31 and 35-36 and 38 under 35 U.S.C. 103(a) as being unpatentable over Hulai et al. (US 2003/0060896) in view of newly cited Krebs et al. (Mobile Adaptive Applications for Ubiquitous Collaboration in Heterogeneous Environments, 2002, IEEE, referred to as "Krebs).

The Examiner has further rejected claims 15-17 and 32-34 under 35 U.S.C 103(a) as being unpatentable over Hulai in view of Krebs and further in view of Saulpaugh et al (U.S. 7,010,573).

The Examiner has further rejected claims 13 and 30 under 35 U.S.C 103(a) as being unpatentable over Hulai in view of Krebs and further in view of Greene et al (U.S. 6,868,441). Applicant respectfully traverses the rejections.

As previously presented, claim 1 of the application relates to a method for generating a screen element, based on a data object, of a component application executing on a wireless device for display on a user interface of the wireless device, the component application including a data component having at least one data field definition and a screen component having at least one screen element definition, the components being defined in a structured definition language, the method comprising the steps of:

selecting the screen component corresponding to the screen element selected for display;

identifying at least one mapping present in the screen component, *the mapping for specifying a relationship between the screen component and the data component as defined by an identifier representing the mapping*;

selecting the data component mapped by the mapping according to the mapping identifier;

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obtaining a data object field value corresponding to the data field definition of the mapped data component;

generating a screen element from the screen element definition to include the data object field value according to the format of the data field definition as defined in the mapped data component.

As described in the specification from page 17, line 14 to page 22, line 25, the component application comprises a plurality of components defined in a structured language, such as XML, and a workflow component defined in a scripting language, such as ECMAscript. The component application is downloaded to the mobile communication device for execution thereon.

Further, as described from page 23, line 25 to page 28, line 14, information for a screen component of the component application and a data component of the component application may overlap. A mapping is identified or generated between the screen component and the data component for the related information. Therefore, when the screen element is generated for display, information for the screen element is retrieved from the mapped data component rather than the screen component.

Further, the mapping between the screen component and the data component allows dynamic data exchange between the screen component and the data component. Accordingly, after the screen component is populated with data from the data component, any change in that data via the screen component is automatically propagated back to the data component.

Accordingly it will be appreciated from the description and claim 1 that one aspect of the present invention relates to the generation of a screen element for display on a device from a data object of a data component using a mapping.

The Examiner appears to have agree with our previously submissions that Hulai does not describe a mapping *for specifying a relationship between the screen component and the data component*. However, the Examiner alleges that newly

referenced Krebs teaches such a relationship. However, Applicant respectfully disagrees with the Examiner's interpretation of Krebs.

Specifically, the Examiner alleges that Krebs discloses "at least one mapping present in the screen component, the mapping for specifying a relationship between the screen component and the data component as defined by an identifier representing the mapping." The Examiner appears to correlate the general description of the application interface ("the former one") with the data component and the device dependent representation ("the later") with the screen component.

The Applicant respectfully disagree with the Examiner's conclusion and submits that the Examiner appears to be using a hindsight analysis, which is impermissible.

Specifically, Applicant submits that there is no teaching in Krebs to suggest at least one mapping present *in the screen component*.

Krebs (Mobile Adaptive Applications for Ubiquitous Collaboration in Heterogeneous Environments)

Krebs teaches a very different system to the one taught by Hulai and the one taught by the Applicant. In order to further the understanding of what specifically is taught by Krebs, Applicant submits herewith a paper by Krebs having the same title and published in the Proceedings of the 37th Hawaii International Conference on System Sciences, 2004. This later publication provides more details about how Krebs is actually designed.

As described in Section 1 (page 2, left-hand column), the paper is geared towards adapting interfaces to multiple platforms for facilitating collaboration in a heterogeneous environment. Accordingly, a generic language is defined for developing an application. Interactors are defined for mapping the description into device-specific implementation.

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Specifically, the interactors are data-centric and define the types of data typically encountered in an application. The interactors are then implemented for each type of computer platform desirable.

An application developer uses the infrastructure to develop a new application. The application is described generically in the interactor markup language. The generic application is then mapped to a device specific implementation using a specific implementation of the interactors.

As described in Section 5 (pages 5 and 6) a generic description of the interface (generic interface graph) is mapped to a device-dependent representation (interface graph). The generic interface graph is expressed by way of the interactor language and the interface graph is expressed by reference to device-specific widgets. The rules for the mapping are *device specific* and not application specific so for each device the *same mapping is applied to different applications*.

Further, as described in Section 3 (page 4, left-hand column), data is represented as a collection of data objects in a repository (data graph). The data objects are encapsulated as uforms. A global repository of uforms is mapped to a device-specific local repository, which is mapped to the interface graph and then to the widget graph. In the last two steps, the individual *uforms are mapped to corresponding interactors* and the widget implementations are loaded.

Accordingly, it will be appreciated that Krebs does not teach at least one mapping present in the screen component as required by the Applicant's invention.

Further, the Applicant is not claiming that mapping in general is new. Rather, the use of a mapping as defined in the claims provides an advantage for a component application. As described in the Specification, changes to the application domain data are automatically synchronized with the user interface, and user-entered data is automatically reflected in the application domain data. The primary mechanism behind this synchronization is the mapping of screens

and data. This mechanism enables creation of dynamic and interactive screens. All changes to the data component can be immediately reflected on the screen and vice versa.

There is no teaching in Krebs that suggests such an advantage. In contrast, since Krebs relates to a collaborative system, changes to the "data components" (data graph) and "screens components" (interface graph) are propagated via the server (see sections 7 and 8 on page 7). Accordingly, it will be appreciated that the mapping in Krebs is not the same as the mapping claimed in the present invention.

Further, the Examiner has suggested that it would be obvious to combine Krebs with Hulai and arrive at the claimed invention because the framework of Krebs provides significant advantages of shared data adaptation and user interface adaptation. However, as discussed above, shared data adaptation related specifically to the mapping of a shared generic data graph to a user-specific data graph. Similarly, user interface adaptation relates specifically to the mapping of a generic user interface for a device specific interface graph.

Accordingly, it will be appreciated that the mappings taught by Krebs relate to transforming information from a generic language to a device specific language using interactors. Since there is nothing in Krebs that teaches at least one mapping present in the screen component as defined in claim 1, the Applicant submits that a person of ordinary skill in the art would be able to combine Krebs with Hulai and arrive at the claimed invention, even if one were motivated to do so.

For at least the reasons discussed above, Applicant submits claim 1 is both novel and inventive over Hulai in view of Krebs and, as such, requests that the rejection of claim 1 be withdrawn.

Independent Claims 18, 35, 36 and 38 are similar in scope to claim 1, and therefore a similar argument applies. Accordingly, we submit that the rejection to these claims be withdrawn for at least the same reasons.

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Since the remaining dependent claims depend from one of the above noted independent claim, since we submit that the rejection of these claims be withdrawn for at least the same reasons.

For the foregoing reasons, the Applicant respectfully submits that the claimed invention is patentable over the prior art. Reconsideration and allowance of the claims is respectfully requested.

Respectfully submitted,

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